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09/759,153	01/16/2001	Ghassan Naim	59864.00548	2840
32294	7590	01/08/2007	EXAMINER	
SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182			NGUYEN, TOAN D	
			ART UNIT	PAPER NUMBER
			2616	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	01/08/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/759,153	NAIM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Toan D. Nguyen	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 12 October 2006.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 06 July 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Objections***

1. Claims 1 and 5 are objected to because of the following informalities:

Claim 1 line 4, it is suggested to change “said first network element” to --- a first network element ---.

Claim 1 line 6, it is suggested to change “the controller” to --- a controller ---.

Claim 1 line 12, it is suggested to change “a controller” to --- the controller ---.

Similar problem exists in claim 5 line 12.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang et al. (EP 0981229 A2) in view of Yao et al. (US 6,785,262).

For claims 1, 2 and 7, Hwang et al. disclose controlling asymmetric dynamic radio bearers in mobile packet data communications system, comprising:

monitoring the length of data queue in the first network elements as an indication of future need of communication resources in said first network element (figure 1, Abstract lines 14-16, and page 3, col. 4 lines 18-25);

sending the indication from the first network element (page 3, col. 4 lines 18-25 and col. 4 lines 51-53);

controlling the communication resources between the first network element and the second network element based on this indication (Abstract lines 1-9, page 2, col. 2 line 18 to page 3 line 1); and

controlling communications resources in a transmission from the first network element to the second network element (Abstract lines 1-9, page 2, col. 2 line 18 to page 3 line 1).

However, Hwang et al. do not expressly disclose a controller wherein the communication resources are allocated, and wherein the indication is a coded value of a length of a data queue. In an analogous art, Yao et al. disclose a controller wherein the communication resources are allocated (figure 3, reference 14, col. 6 line 55), and wherein the indication is a code value (col. 9 lines 57-59) of a length of the data queue (col. 12 lines 6-8, and col. 12 lines 41-43).

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Yao et al. disclose further wherein the first network element (figure 3, reference 10) is connected to the controller (figure 3, reference 14, col. 6 lines 54-55) by way of the second network element (figure 3, reference 12) (col. 7 lines 27-28 as set forth in claim 2); wherein in the monitoring, the first network element is a mobile station (figure 3, reference 10) and the second network element is a base station (figure 3, reference 12) of a wireless communication network (col. 7 lines 27-28 as set forth in claim 7).

One skilled in the art would have recognized the controller wherein the communication resources are allocated, and wherein the indication is a coded value of the length of the data queue, and would have applied Yao et al.'s determine the channel quality based on the length of queue 408 in Hwang et al.'s mobile station transmission. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Yao et al.'s method and apparatus for voice latency reduction in a voice-over-data wireless communication system in Hwang et al.'s controlling asymmetric dynamic radio bearers in mobile packet data communications system with the motivation being to determine channel quality (col. 12 line 1).

For claim 3, Hwang et al. disclose wherein in the sending, the indication includes information about a transmit buffer of the first network element (page 2, col. 2 lines 23-44).

For claim 4, Hwang et al. disclose wherein in the sending, the indication includes information on the additional resources needed for said first network element (figure 4, page 2, col. 2 lines 28-34 and page 5, col. 7 lines 9-36).

For claim 5, Hwang et al. disclose controlling asymmetric dynamic radio bearers in mobile packet data communications system, comprising:

monitoring an indication of future need of communication resources in a first network element (figure 1, page 3, col. 4 lines 18-25);

sending the indication from the first network element (page 3, col. 4 lines 18-25 and col. 4 lines 51-53);

controlling the communication resources between the first network element and a second network element based on this indication (Abstract lines 1-9, page 2, col. 2 line 18 to page 3 line 1), and

controlling communications resources in a transmission from the first network element to the second network element (Abstract lines 1-9, page 2, col. 2 line 18 to page 3 line 1),

wherein the indication includes information about a transmit buffer of the first network element (figure 4, page 2, col. 2 lines 28-34 and page 5, col. 7 lines 9-36).

However, Hwang et al. do not explicitly disclose a controller wherein the communication resources are allocated, and wherein the controller is separate and independent from the first network element, wherein the indication includes coded value corresponding to predefined resources. In an analogous art, Yao et al. disclose a controller wherein the communication resources are allocated (figure 3, reference 14, col. 6 line 55), and wherein the controller (figure 3, reference 14, col. 6 lines 54-55) is separate and independent from the first network element (figure 3, reference 10) (col. 7

lines 27-31), wherein the indication includes coded value (col. 9 lines 57-59) corresponding to predefined resources (col. 12 lines 6-13).

One skilled in the art would have recognized the controller wherein the communication resources are allocated and wherein the controller is separate and independent from the first network element, wherein the indication includes coded value corresponding to predefined resources, and would have applied Yao et al.'s determine the channel quality based on the length of queue 408 in Hwang et al.'s mobile station transmission. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Yao et al.'s method and apparatus for voice latency reduction in a voice-over-data wireless communication system in Hwang et al.'s controlling asymmetric dynamic radio bearers in mobile packet data communications system with the motivation being to determine channel quality (col. 12 line 1).

For claim 6, Hwang et al. disclose wherein in the monitoring, the indication includes information about a transmit buffer of the first network element (figure 4, page 2, col. 2 lines 28-34 and page 5, col. 7 lines 9-36).

5. Claims 8-10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yao et al. (US 6,785,262) in view of Hwang et al. (EP 0981229 A2).

For claim 8, Yao et al. disclose method and apparatus for voice latency reduction in a voice-over-data wireless communication system, comprising:

a plurality of first stations (figure 3, reference 10, col. 7 line 2);

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a second station (figure 3, reference 12) connected to said plurality of first stations (figure 3, reference 10) through a plurality of communication links (col. 7 lines 27-28);

a controller (figure 3, reference 14) configured to control the allocation of said communication resources among the links, the controller being separate and independent from the first station (col. 7 lines 31-32), based upon lengths of data queues in the first stations, wherein the information is a coded value (col. 9 lines 57-59) of the lengths of the data queues (col. 12 lines 6-8).

However, Yao et al. do not expressly disclose said allocation being performed in accordance with information transmitted from the first stations which indicates a need for communication resources (figure 1, Abstract lines 14-16, and page 3, col. 4 lines 18-25).

One skilled in the art would have recognized said allocation being performed in accordance with information transmitted from the first stations which indicates a need for communication resources, and would have applied Hwang et al.'s mobile station transmission in Yao et al.'s determine the channel quality based on the length of queue 408. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Hwang et al.'s controlling asymmetric dynamic radio bearers in mobile packet data communications system in Yao et al.'s method and apparatus for voice latency reduction in a voice-over-data wireless communication system with the motivation being requested radio service (page 3, col. 4 line 20).

For claim 9, Yao et al. disclose wherein said controller (figure 3, reference 14) is part of said base station (figure 3, reference 12) (col. 7 lines 29-31).

For claim 10, Yao et al. disclose wherein said base station (figure 3, reference 12) includes a receiver configured to receive a transmission and producing data; said first stations are mobile stations in a wireless network (figure 3, reference 10, col. 7 line 28).

For claim 12, Yao et al. disclose wherein said base station includes a receiver configured to receive a transmission and producing data (col. 6 lines 7-8); a decoder (figure 6, reference 614) configured to decode a field of said data and producing an indication of the data queue in an associated first station (figure 3, reference 10)(col. 13 line 54);

wherein said controller (figure 3, reference 14) receives said information from said decoder and allocates communication resources in accordance therewith (col. 7 lines 29-32).

For claim 13, Yao et al. disclose wherein said indication is provided for each data block transmitted (col. 12 lines 2-5).

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yao et al. (US 6,785,262) in view of Hwang et al. (EP 0981229 A2) further in view of Ishida et al. (US 6,975,604).

For claim 11, Yao et al. disclose:  
a data queue (figure 4, reference 408, col. 9 line 18);  
an encoder configured to generate a code representative of the length of the data queue (col. 9 line 17).

a transmitter (figure 4, reference 420) configured to transmit said data with said code included therein as a field (col. 9 lines 17-20).

However, Yao et al. in view of Hwang et al. do not expressly disclose a data generator. In an analogous art, Ishida et al. disclose a data generator (figure 6, reference 617);

One skilled in the art would have recognized the data generator, and would have applied Ishida et al.'s mobile station in Yao et al.'s determine the channel quality based on the length of queue 408. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Ishida et al.'s base station controller and mobile station in Yao et al.'s method and apparatus for voice latency reduction in a voice-over-data wireless communication system with the motivation being to generate data into frames (col. 8 lines 58-60).

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yao et al. (US 6,785,262).

For claim 14, Yao et al. disclose method and apparatus for voice latency reduction in a voice-over-data wireless communication system, comprising:

a receiver (figure 6, reference 602, col. 13 line 38); and

a decoder (figure 6, reference 614) configured to decode a data queue in at least one mobile station (col. 13 lines 55-57); and

a controller (figure 3, reference 14) configured to control allocation of communication resources (col. 7 line 32),

wherein said decoder (figure 6, reference 614) provides information for the at least one mobile station (figure 3, reference 10) to the controller (col. 7 lines 27-32).

However, Yao et al. do not expressly disclose decoding a code representative of a length of the data queue in at least one mobile station. To include the decoding a code representative of a length of a data queue in at least one mobile station would have been obvious to one of ordinary skill in the art because the decoder 614 would decode the data frames generated by the voice encoder 406 based on the length of queue 408 (a code representative of a length of the data queue in at least one mobile station means).

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yao et al. (US 6,785,262) in view of Ishida et al. (US 6,975,604).

For claim 15, Yao et al. disclose method and apparatus for voice latency reduction in a voice-over-data wireless communication system, comprising:

a data queue (figure 4, reference 408, col. 9 line 18);  
an encoder (figure 4, reference 406) configured to encode a code (col. 9 lines 57-59) representative of the length of the data queue (col. 9 line 17 and col. 12 lines 6-13).  
a transmitter (figure 4, reference 420) configured to transmit said data with said code included therein as a field (col. 9 lines 17-20).

However, Yao et al. do not expressly disclose a data generator. In an analogous art, Ishida et al. disclose a data generator (figure 6, reference 617);

One skilled in the art would have recognized the data generator, and would have applied Ishida et al.'s mobile station in Yao et al.'s determine the channel quality based on the length of queue 408. Therefore, it would have been obvious to one of ordinary

skill in the art at the time of the invention, to use Ishida et al.'s base station controller and mobile station in Yao et al.'s method and apparatus for voice latency reduction in a voice-over-data wireless communication system with the motivation being to generate data into frames (col. 8 lines 58-60).

***Response to Arguments***

9. Applicant's arguments filed 10/12/06 have been fully considered but they are not persuasive.

The applicant argues with respect to independent claim 1, on page 10, fourth paragraph, that Yao also fails to teach, show, or suggest that the code value is an indication of the length of the data queue. The examiner disagrees. Applicant's attention is directed to Yao at col. 9 lines 57-59, where Yao clearly teaches: "As shown in FIG. 5, each vocoder frame contains a number of information bits (a code value means) depending on the data rate for the particular frame." At col. 11 line 67 to col. 12 line 2, Yao further teaches "Alternatively, processor 410 can simply determine the channel quality based on the length of queue 408." And col. 12 lines 41-43, Yao teaches "As in other embodiments, processor 410 determines the communication channel quality, generally by measuring the length of queue 408 (value of a length of a data queue means)."

On page 12, second paragraph, The applicant argues that neither Yao nor Hwang, when taken alone or in combination, teach, show, or suggest the allocation being performed in accordance with information transmitted from the first station, which indicates a need for communication resources based upon lengths of a data queues in

the first stations, wherein the information is a coded value of the lengths of data queues, as recited in Applicant's independent claim 8. The examiner disagrees. Hwang clearly teaches in the Abstract: "The method and apparatus for controlling asymmetric dynamic radio bearers in a mobile packet data communications system involves use of the radio bearers for the specified data rate corresponding to the data rate according to the radio packet data service to activate a predetermined number of radio bearers only according to the amount of transmit data and vary the data rate, thereby making it possible to efficiently use the radio resource (a need for communication resources means) and prevent excessive power consumption and signal interference... (b) examining the amount of data stored in a transmit buffer during transmission of mobile packet data (based upon lengths of a data queues in the first stations, wherein the information is a coded value of the lengths of data queues means)." Yao does teach base upon lengths of data queues in the first stations, wherein the information is a coded value of the lengths of the data queues. The examiner refers to the same response in the independent claim 1 above.

On page 13, third paragraph, Applicant argues that neither of Yao, Hwang, or Ishida teaches, shows, or suggests an allocation being performed in accordance with information transmitted from the first stations, which indicates a need for communication resources based upon lengths of data queues in the first stations, wherein the information is a coded value of the lengths of the data queues, as recited in Applicant's independent 8. The examiner refers to the same response for claim 8. Applicant argues that Ishida fails to further the teaching of Yao and Hwang to the level necessary to

properly support an obviousness rejection of claim 11. The motivation to combine Ishida's teaching of frame generator circuit in Yao and Hwang would be to provide input data into frames for Yao's mobile station and Hwang's mobile station.

On page 15, first paragraph, Applicant argues that Yao fails to teach, show, or suggest each and every limitation recited in Applicant's claim 14. Specifically, Yao does not teach, show, or suggest a decoder providing queue length information for at least one mobile station to a controller, as recited in claim 14. Additionally, claim 14 recites a decoder configured to decode a code representative of a length of a data queue in at least one mobile station, which is not taught, shown, or otherwise suggested by Yao. The examiner disagrees. The examiner refers to the same response in the independent claim 1 above.

On page 16, second paragraph, Applicant argues that Yao and Ishida, when taken alone or in combination, fail to teach, show, or suggest each and every element recited in claim 15. The examiner refers to the same response in the independent claim 1 above.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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